

IN THE CLAIMS:

1-15. (Canceled)

16. (Currently amended) An expression vector comprising two inverted terminal repeats of adeno-associated virus 2 and at least one cassette comprising a promoter capable of effecting cell-specific expression, wherein each of said inverted terminal repeats is SEQ ID NO: 1 or a fragment of SEQ ID NO: 1 that comprises nucleotides 1 to 125 of SEQ ID NO: 1, wherein said promoter is operably linked to a heterologous gene, and wherein said cassette resides between said inverted terminal repeats.

17. (Currently amended) The vector of claim 16 wherein each of said inverted terminal repeats ~~comprises the nucleotides of~~ is SEQ ID NO:1.

18. (Currently amended) The vector of claim 16 wherein each of said inverted terminal repeats is a fragment of SEQ ID NO: 1 comprises nucleotides 1 to 125 of SEQ ID NO:1.

19. (Previously presented) The vector of claim 16 wherein said heterologous gene encodes a biologically functional protein.

20. (Previously presented) The vector of claim 16 wherein said heterologous gene encodes a non-biologically functional protein.

21. (Previously presented) The vector of claim 16 wherein said heterologous gene encodes an antisense RNA.

22. (Previously presented) The vector of claim 16 wherein said heterologous gene is selected from the group consisting of a gene encoding α -globin, β -globin, γ -globin, granulocyte macrophage-colony stimulating factor (GM-CSF), tumor necrosis factor (TNF), any one of interleukins 1-11, neomycin resistance, luciferase, adenine phosphoribosyl transferase (APRT), retinoblastoma, insulin, mast cell growth factor, p53, adenosine deaminase.

23. (Previously presented) The vector of claim 16 wherein said heterologous gene encodes P-glycoprotein.

24. (Previously presented) The vector of claim 21 wherein said antisense RNA is complementary to a segment of the DNA or RNA encoding α -globin.

25. (Previously presented) The vector of claim 16 wherein said vector is AAV-B19-mdr.

26. (Previously presented) A host cell transfected by the vector of any one of claims 16-25.

27. (Previously presented) The host cell of claim 26 wherein said cell is a

hematopoietic stem or hematopoietic progenitor cell.

28. (Previously presented) A virion comprising the vector of any one of claims 16-24.

29. (Previously presented) A host cell infected by the virion of claim 28.

30. (Previously presented) The host cell of claim 29 wherein said cell is a hematopoietic stem or progenitor cell.